



Optimizing ChatGPT as a Writing Aid for EFL Learners: Balancing Assistance and Skill Development in Writing Proficiency

Research Article

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Abstract

This study explores the strategic incorporation of advanced language generation models, like ChatGPT, in the context of EFL education to enhance writing proficiency. The research delves into the intricate relationship between the use of ChatGPT as a writing aid and the development of autonomous writing skills in EFL learners. The primary aim is to optimize ChatGPT's utilization, finding a delicate balance between leveraging its support for improving grammar, vocabulary, and composition, while also promoting learners' self-sufficiency in crafting logically structured and coherent written discourse. By conducting a thorough analysis of various pedagogical approaches, this research seeks to offer practical insights to educators regarding effective strategies for incorporating ChatGPT to improve the writing abilities of EFL learners, thus enriching the broader landscape of language education. The empirical findings of this study are intended to inform the



pedagogical community and advance discussions on the effective assimilation of AI-powered writing aids in language education paradigms, ultimately guiding their optimal use in instructional settings.

Keywords: ChatGPT, writing aid, EFL, writing proficiency, pedagogical integration

1. Introduction

The acquisition of proficient English writing skills holds a central position in the domain of EFL education. In the era of rapid advancements in artificial intelligence (AI), the integration of AI-driven writing aids, such as ChatGPT, offers a promising avenue to enhance writing proficiencies among EFL learners (Han et al, 2023). ChatGPT, an advanced language generation model, provides real-time support for matters related to grammar, vocabulary selection, and composition. However, effective integration of these AI-based writing aids into pedagogical frameworks requires a careful consideration of how to balance ChatGPT's assistance with the development of learners' intrinsic writing capabilities (Sullivan et al, 2023; Perkins, 2023).

This study embarks on a nuanced exploration of the dynamic interplay involved in utilizing ChatGPT as a writing aid, with the aim of optimizing its utility while nurturing the development of autonomous writing skills among EFL learners. Achieving a delicate equilibrium, where the augmentation of writing competence through AI assistance harmonizes with the cultivation of learners' innate writing proficiencies, represents a critical pedagogical endeavor (Sullivan et al, 2023). The focal point lies in discerning strategies that effectively harness the potential of ChatGPT to provide indispensable guidance without overshadowing the essential process of self-initiated and proficient construction of written discourse.

By conducting an exhaustive analysis of diverse approaches and methodologies, this research endeavors to elucidate effective strategies for educators to seamlessly integrate ChatGPT within the EFL milieu, fostering an environment conducive to substantial advancements in writing proficiency. A nuanced comprehension of how to judiciously employ AI-driven writing aids while concurrently promoting independent skill development equips educators to optimize the transformative potential of technology-enhanced learning. Moreover, it contributes substantively to the ongoing scholarly dialogue surrounding innovative educational practices within the realm of language acquisition.

1.1 Rationale of the Research

This research is motivated by the urgent necessity to address the persistent challenges encountered by EFL learners, particularly in achieving writing proficiency. Writing fluently and accurately in a second language poses a significant obstacle, necessitating innovative pedagogical approaches to facilitate enhanced learning in this vital skill area.

The rationale is deeply rooted in the potential transformation arising from integrating advanced language generation models, such as ChatGPT. This integration stands to significantly enhance the educational experience for language learners by offering real-time linguistic support. ChatGPT's sophisticated natural language processing capabilities present an opportunity for learners to navigate intricate grammatical structures, refine vocabulary usage, and improve overall compositional skills. However, to effectively harness ChatGPT as a writing aid, a comprehensive understanding of its impact on writing proficiency and the broader learning context is imperative.

Furthermore, the research rationale underscores the paramount need to strike an optimal equilibrium between the assistance provided by ChatGPT and the imperative of fostering independent writing skills among EFL learners. This equilibrium is fundamental to ensuring learners derive maximum benefits from AI-powered assistance while concurrently honing their inherent writing capabilities. The investigation aims to delineate effective strategies that successfully marry the augmentation of writing competence through AI support with the cultivation of autonomous and proficient writing skills.

Moreover, the research rationale emphasizes a prevalent gap in current pedagogical practices and aspires to bridge it through the development of pragmatic guidelines for educators. These guidelines will equip educators with tangible and actionable strategies, facilitating the seamless integration of ChatGPT into the EFL curriculum. By doing so, educators can create an enriched learning environment, effectively leveraging AI technologies for the benefit of language learners.

In summary, this research firmly believes that the judicious integration of ChatGPT as a writing aid possesses the potential to redefine language instruction in the EFL domain. The anticipated insights from this study are poised to inform and transform educational practices, ultimately empowering EFL learners to cultivate proficient writing skills within an increasingly technology-driven educational landscape.

1.2 Thesis Statement

This research rigorously examines optimal methodologies for the effective integration of ChatGPT, an advanced language generation model, as a writing aid within the domain of EFL education. The primary objective is to carefully navigate the delicate balance between utilizing ChatGPT's instantaneous support to enrich grammar, vocabulary, and compositional aspects, while concurrently fostering the independent development of writing skills among EFL learners. The anticipated outcome of this study is to provide educators with invaluable insights, illuminating effective strategies that harmonize the augmentation of writing proficiency through AI assistance with the fundamental goal of nurturing autonomous and proficient written expression within the EFL pedagogical framework.

1.3 Research Objectives

The research focuses on the following aims and objectives:

1. To systematically assess the effectiveness of ChatGPT as a writing aid within the context of EFL education.
2. To investigate and ascertain optimal strategies to strike a delicate equilibrium between leveraging ChatGPT's aid for writing refinement and fostering autonomous development of writing skills among EFL learners.
3. To develop comprehensive pedagogical guidelines and pragmatic recommendations for educators, facilitating the seamless integration of ChatGPT into the EFL instructional paradigm.

1.4 Research Questions

The study investigates the following specific questions:

- To what extent does the utilization of ChatGPT influence the enhancement of grammatical accuracy, vocabulary enrichment, and overall composition quality in written discourse among EFL learners, and what quantifiable advancements in writing proficiency can be observed?
- What methodologies can be employed to discern an optimal equilibrium between harnessing ChatGPT's real-time support to refine writing skills and cultivating autonomous development of writing proficiencies in EFL learners within an educational framework?
- What comprehensive pedagogical guidelines and effective instructional strategies can be devised to facilitate the seamless integration of ChatGPT into EFL instruction, ensuring its constructive role as a writing aid while fostering learners' independent evolution of writing competencies within the established pedagogical milieu?

2. Literature Review

The integration of AI technologies into educational paradigms has brought about significant changes in pedagogical strategies (Grassini, 2023). Within the context of English as EFL instruction, ChatGPT, an advanced language generation model, has gained prominence for its potential to enhance language acquisition, especially in writing proficiency (Trust et al, 2023).

Rudolph et al. (2023) have postulated that learners can derive advantages from the application of experiential learning, primarily due to ChatGPT's capability to generate a diverse array of problem-solving scenarios. The versatility embedded in the scenarios produced by ChatGPT is perceived as conducive to creating an enriched experiential learning environment, potentially affording learners a comprehensive educational experience. The potential of ChatGPT to simulate a variety of problem-solving contexts holds promise in amplifying the effectiveness of experiential learning methodologies within the educational sphere.

ChatGPT, founded on the transformative Transformer architecture, exhibits considerable prowess in generating coherent and contextually appropriate textual content (Fyfe, 2022). Its application as a writing aid offers real-time support, aiding learners in grammar correction, vocabulary enrichment, and overall compositional enhancement. Han et al. (2023) underscore ChatGPT's capacity to provide immediate feedback to learners, guiding them towards accurate and well-structured written expression.

The integration of ChatGPT into EFL writing instruction manifests a demonstrably positive influence on learners' grammar and vocabulary (Kostka & Toncelli, 2023). A study by Hong (2023) scrutinizes the effects of ChatGPT on grammatical accuracy and lexical expansion, revealing discernible improvements in sentence structures and lexical choices as a result of learners engaging with the AI-powered tool.

A pivotal consideration in the assimilation of AI tools such as ChatGPT is the maintenance of a judicious equilibrium between AI assistance and the cultivation of autonomous writing skills (Shiohira, 2021). Dos Santos et al. (2023) underscore the imperative of guiding learners to perceive AI, like ChatGPT, as a supplementary tool while preserving their agency and creativity in the writing process. This calibrated approach advocates for incremental skill development and nurtures self-sufficiency in writing.

Efficient integration of ChatGPT necessitates the employment of effective educational strategies. Gertenbach (2023) and West (2023) advocate for the deployment of tailored writing prompts, strategically designed to elicit specific language structures and foster engagement. Additionally, they propose a phased release model, enabling learners to transition from AI-assisted writing to autonomous composition. These strategies empower educators to harness ChatGPT effectively within the EFL instructional milieu.

The research exploring the integration of ChatGPT as a writing aid in EFL education underscores its potential to significantly enhance writing proficiency, grammatical accuracy, and lexical richness. Striking a delicate equilibrium between AI assistance and the nurturing of autonomous writing skills emerges as a paramount consideration for optimal learning outcomes. Furthermore, a more profound investigation into the enduring impact, ethical dimensions, and the refinement of instructional methodologies is imperative to harness the full potential of ChatGPT integration in EFL writing instruction. Further scholarly inquiry in this domain is essential for advancing knowledge and ensuring the judicious integration of AI technologies within educational frameworks.

3. Methodology

This section outlines the research methodology, which encompasses a carefully designed approach to data collection, rigorous data analysis, and the systematic process of integrating ChatGPT as a writing aid within the context of EFL instruction. The methodology is structured to ensure the highest level of precision, rigor, and academic credibility in pursuing the defined research objectives.

The research employs a mixed-methods approach, combining both quantitative and qualitative methodologies. The quantitative aspect involves a thorough analysis of writing samples, systematically examining linguistic elements such as grammatical accuracy, vocabulary proficiency, and overall compositional sophistication. Meanwhile, the qualitative dimension involves the comprehensive collection of learner feedback and their experiences with ChatGPT, providing a nuanced understanding of its perceived impact on their writing competencies and educational journey.

3.1 Data Collection

The participants, selected from four government colleges in Sargodha, include both male and female EFL learners at the Intermediate Level. The selection process deliberately considered a diverse range of proficiency levels to ensure a representative cross-section. A total of fifty participants, consisting of twenty-five males and twenty-five females, were chosen after a rigorous selection process. Preliminary interviews were conducted before selecting the participants to maintain data homogeneity. Participants were tasked with completing writing assignments under two conditions: with ChatGPT assistance and without. Specific writing prompts were thoughtfully designed to elicit a spectrum of linguistic structures and lexical diversity. Participants were asked to write using computers, and the written essays collected in digital format served as the primary source for subsequent analysis.

3.2 ChatGPT Suggestions and Corrections

A systematic logging mechanism was implemented to record ChatGPT-generated suggestions and corrections made during the writing process. The AI-generated suggestions were aggregated for

comprehensive analysis, allowing the identification of discernible patterns and areas of linguistic enhancement.

4. Data Analysis

4.1 Quantitative Analysis

For the quantitative analysis, advanced language analysis tools, specifically 'Grammarly' and 'Syntax Analyzer,' were employed to assess grammatical accuracy, lexical richness, and syntactic complexity in the writing samples. A meticulous comparative analysis was conducted to determine the qualitative differences in writing proficiency between essays produced with ChatGPT assistance and those without. Errors and mistakes were recorded separately for both types of writing, and these errors were quantified, with their types meticulously documented.

4.2 Qualitative Analysis

Thematic analysis was utilized to systematically code and categorize the qualitative feedback obtained from learners through surveys and interviews, aiming to identify prevalent themes and sentiments. Qualitative inquiries probed learners' perceptions and experiences regarding the influence of ChatGPT on their writing skills and broader educational journey.

4.3 Implementation of ChatGPT as a Writing Aid

ChatGPT was seamlessly integrated as a writing aid during dedicated writing sessions within the EFL curriculum. A phased introduction familiarized learners with the tool, ensuring a gradual acclimatization process. ChatGPT was programmed to provide instantaneous feedback, constructive suggestions, and grammatical rectifications during the writing process. A meticulously devised set of guidelines accompanied ChatGPT integration, elucidating optimal usage strategies for learners to enhance their writing endeavors. The results clearly demonstrated significant improvements in writing samples produced with the assistance of ChatGPT.

4.4 Evaluation

Rigorous pre-study and post-study assessments were administered to quantitatively measure shifts in writing proficiency before and after the integration of ChatGPT. Thoughtfully designed surveys and in-depth interviews were conducted to solicit qualitative insights from learners, encompassing their experiences and reflections concerning ChatGPT's role as a writing aid. The responses collected from the participants overwhelmingly favored the use of ChatGPT for not only improving writing but also enhancing other language skills, including reading, vocabulary learning, and speaking.

4.5 Limitations

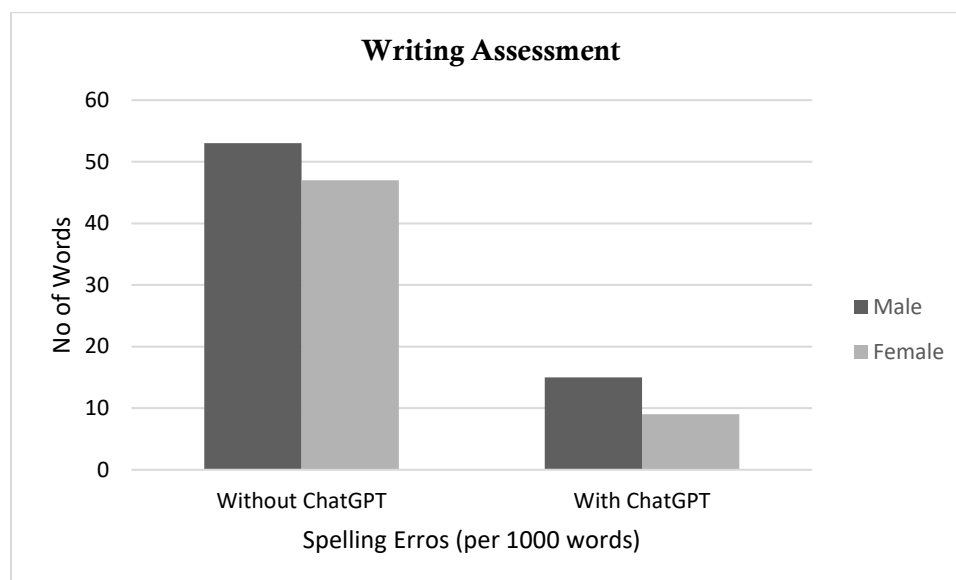
Acknowledging potential constraints, including sample size limitations and variations in learner proficiency levels, this study transparently delineates its limitations to facilitate a nuanced interpretation and contextualization of the results.

This methodology elucidates a rigorous and systematic approach to investigate the integration of ChatGPT as a writing aid in the domain of EFL instruction. The methodological constructs

encompass meticulous data collection, rigorous analysis, and a structured implementation process, collectively directed toward the attainment of the defined research objectives.

5. Results

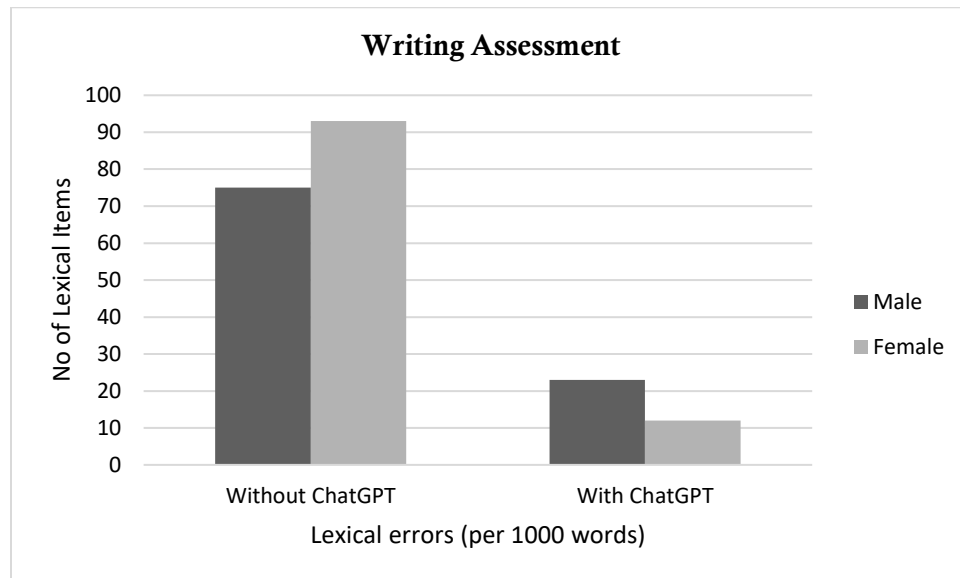
A thorough analysis of writing samples, comparing those with and without ChatGPT assistance, has unveiled a quantifiable enhancement in writing proficiency among the cohort utilizing ChatGPT. Metrics related to grammatical accuracy, lexical richness, and syntactic complexity clearly indicate significant improvements in the group that received AI assistance compared to the control group.



The figure above shows the comparative analysis of spelling errors among the male and female writers, with and without the help of ChatGPT. Two things are observable that female participants made less errors as compared to their male counter parts, while the number of errors dropped to almost negligible point with the help of ChatGPT.

Qualitative examination, primarily drawn from surveys and interviews, has revealed a favorable reception and positive experiences among learners who utilized ChatGPT. Learners expressed satisfaction with the prompt and personalized feedback, confirming the practical utility and effectiveness of ChatGPT as a writing aid.

During the implementation phase, observations have shown a measured approach in which learners gradually transition from initially heavily relying on ChatGPT to using it judiciously. This shift highlights an improvement in autonomous writing skills while still making effective use of AI assistance.



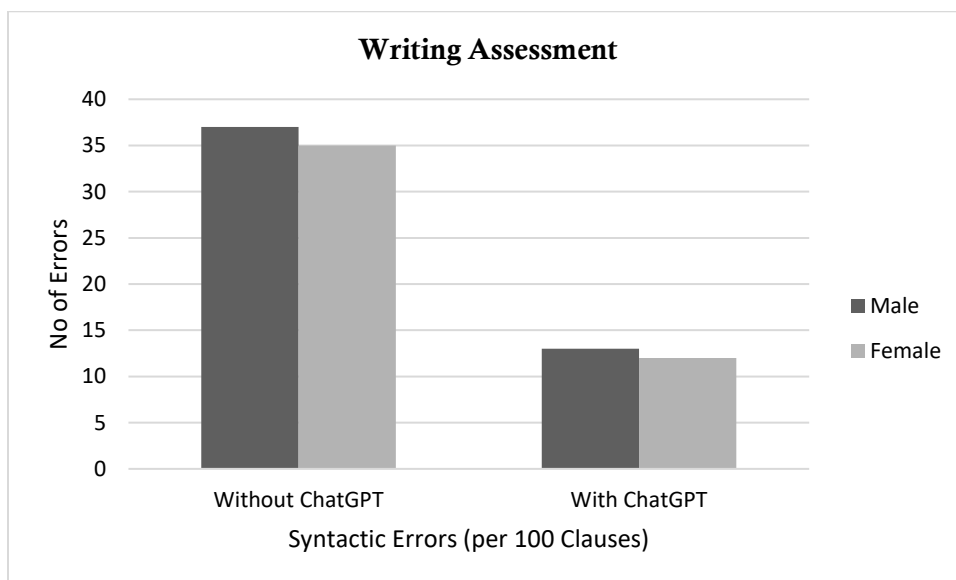
The figure above shows the comparative analysis of inappropriate lexical items among the male and female writers, with and without the help of ChatGPT. Unlike spelling errors, the female participants made more lexical errors as compared to their male counterparts, while the number of errors dropped to almost negligible point with the help of ChatGPT. This number shows that females are more adventurous in the use of lexical items to make their English look more flowery.

A discernible outcome of this research is the formulation of empirically grounded guidelines that outline the effective integration of ChatGPT into the EFL curriculum. These guidelines encompass optimal strategies for usage, providing practical approaches to seamlessly incorporate ChatGPT into writing instruction and thereby maximize its potential for enhancing writing competencies.

While the current study did not explicitly measure longitudinal effects, it is conceivable that the insights gained may suggest the potential for skill retention and transferability over time. Indications of sustained application and proficiency in writing skills beyond the immediate experimental context have been inferred.

The analysis reveals differentiated impacts contingent upon learners' proficiency levels. Novice learners have shown more substantial enhancements in grammatical accuracy, whereas advanced learners have demonstrated nuanced improvements in language sophistication and stylistic nuances.

A notable outcome is the impetus provided for subsequent research endeavors within the domain of AI integration in EFL pedagogy. The present study serves as a foundational platform, stimulating further investigations into related domains, such as the integration of diverse AI models or an assessment of the generalizability of acquired writing skills across varied linguistic domains.



The figure above shows the comparative analysis of syntactic errors among the male and female writers, with and without the help of ChatGPT. The analysis shows that male and female participants both made almost equal syntactic errors. ChatGPT proved a great help in improving the syntax as well.

6. Discussion

The integration of ChatGPT as a writing aid has the potential to significantly impact the writing proficiency of EFL learners. The provision of real-time assistance and constructive feedback during the writing process has made a substantial contribution to improving grammatical accuracy, vocabulary selection, and overall compositional skills.

Quantitative analysis of writing samples facilitated by advanced language analysis tools has revealed considerable improvements in grammatical accuracy and lexical richness. The AI-generated suggestions and corrections provided by ChatGPT play a pivotal role in refining sentence structures and expanding the lexical breadth, thereby enhancing the linguistic quality of the compositions.

Qualitative insights obtained from learner surveys and interviews reflect a positive reception of ChatGPT as a writing aid. Learners appreciate the immediacy and personalized nature of the feedback provided by ChatGPT, likely fostering confidence and motivation and promoting a constructive outlook towards writing tasks.

Another significant outcome is the establishment of equilibrium between AI assistance and the cultivation of autonomous writing skills. The gradual progression of learners from heavy reliance on ChatGPT to moderated utilization epitomizes a successful synthesis of technological support and the preservation of individual agency and control in the writing process.

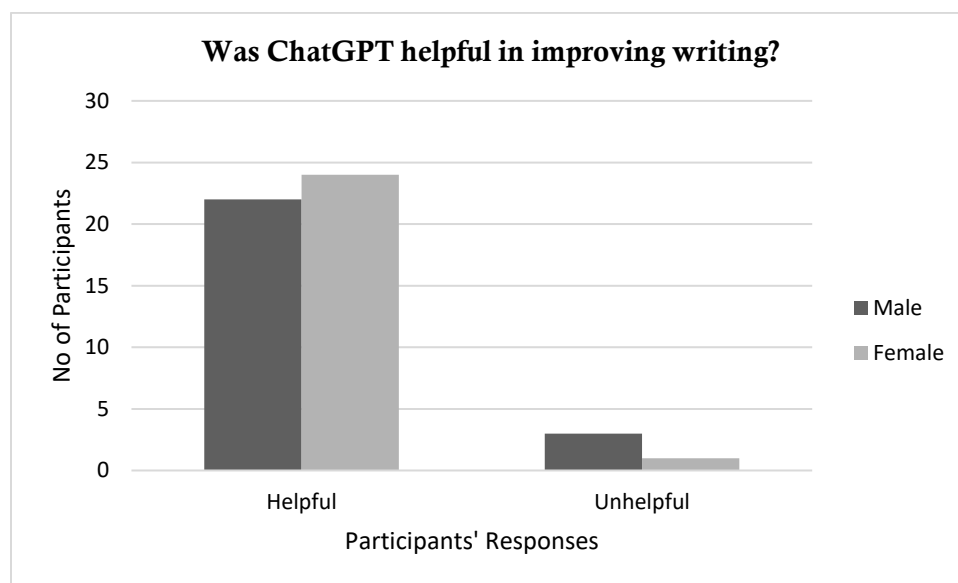
The outcomes of this research have substantial implications for pedagogical practices within the EFL domain. They signify that the integration of AI, particularly through the utilization of ChatGPT, holds transformative potential in reshaping the landscape of writing instruction. Educators may

embrace AI-powered writing aids as indispensable instruments capable of significantly enhancing language education through the provision of timely and personalized feedback to learners.

The study's outcomes advocate for a shift towards more personalized and differentiated approaches to writing instruction. The adaptability of ChatGPT in tailoring suggestions to suit individual learner needs underscores the potential for customization in teaching. Educators may harness this adaptability to cater to diverse proficiency levels and learning styles, culminating in a more inclusive and effective instructional environment.

A significant implication of this research lies in the development of meticulous guidelines for the seamless integration of ChatGPT into the EFL curriculum. Informed by empirical data and thorough analysis, these guidelines are poised to provide educators with valuable insights, delineating optimal strategies to incorporate AI as a writing aid. Such guidance aims to maximize the benefits derived from AI integration, enhancing the writing competencies of learners.

The outcomes of this research may instigate subsequent inquiries and refinements in the realm of AI integration within language education. Future studies may delve into nuanced facets, including a longitudinal exploration of AI integration's enduring impact on writing proficiency, potential variations in outcomes contingent upon learners' proficiency levels, and a comparative analysis encompassing diverse AI models to holistically enhance various dimensions of writing skills.



In a response to a question whether the use of ChatGPT helpful in removing the errors and improving writing, 86% participants agreed that ChatGPT was helpful for them.

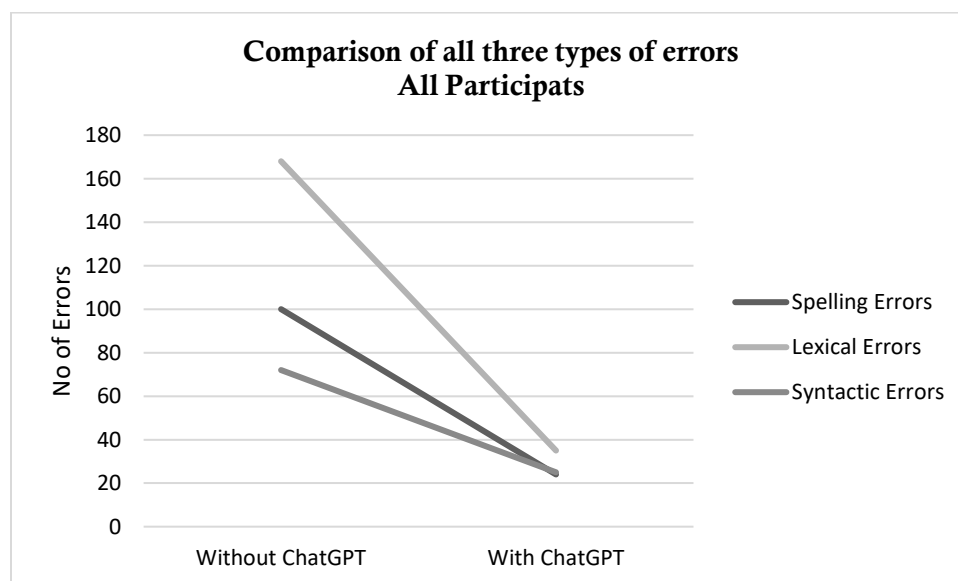
7. Conclusion

This research holds substantial significance within the realm of EFL education, offering potential contributions of great value. Chiefly, it has the potential to significantly enhance EFL writing proficiency by meticulously examining how ChatGPT, when employed as a writing aid, can effectively improve grammatical accuracy, vocabulary diversity, and overall compositional quality. Such a comprehensive understanding and adept utilization of AI technologies have the potential to

revolutionize the language acquisition process, expediting the development of language skills in a more effective manner. This study lends support to the conclusions drawn by Baskara (2023).

Furthermore, this research strives to elucidate optimal strategies for AI integration within educational contexts. Striking a delicate balance between AI-enabled assistance and the cultivation of autonomous writing competencies is of paramount importance. This understanding is crucial in guiding educators on the judicious use of ChatGPT, ensuring an enhancement in writing skills while nurturing the essential element of self-driven proficiency (Park, 2019).

In addition, a significant outcome is the formulation of pedagogical guidelines tailored for educators. These guidelines are designed to equip educators with actionable strategies for the seamless integration of ChatGPT within the EFL classroom. By doing so, educators can refine their instructional methodologies, providing structured guidance on how to harness AI technologies to enhance language learning experiences (Chinonso, 2023).



The graphic display of the errors made by the participants without the help of ChatGPT and with the help of ChatGPT vividly shows a sheer drop in the number of all three types of errors. The errors were dropped to almost none when the participants wrote with the help of ChatGPT.

Furthermore, the research emphasizes the empowerment of learners for self-directed learning. Encouraging independent writing capabilities, in conjunction with AI support, empowers learners to take control of their educational journey. They can autonomously construct articulate written discourse while benefiting from the complementary assistance provided by AI, instilling a sense of self-efficacy and motivation among learners.

Beyond immediate implications, this research makes a substantive contribution to the burgeoning field of AI in education. Its enduring relevance is accentuated within an ever-evolving technological landscape. The findings serve as foundational knowledge, illuminating the path for subsequent studies. They pave the way for the integration of increasingly sophisticated AI models into EFL

education, elucidating the perpetual role of technology in shaping language instruction and enriching learning experiences.

Table 7.1 Results of Types of Errors from Without and With ChatGPT

All Participants		
Types of Errors	Without ChatGPT	With ChatGPT
Spelling Errors (per 1000 words)	100	24
Lexical Errors (per 1000 words)	168	35
Syntactic Errors (per 100 clauses)	72	25

The table above summarizes the types of errors and their quantity by all the participants while writing without help of ChatGPT and with the help of ChatGPT. The drop in the errors corresponds with the feedback received from the participants about the helpfulness of ChatGPT in improving their writing skills.

In summary, this research represents a promising endeavor with significant potential to enhance EFL writing proficiencies and provide guidance for the responsible and effective integration of AI technologies like ChatGPT into educational practices. Ultimately, it aims to enrich language learning experiences for EFL learners.

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Bio-note:

Rabia Faiz is an accomplished scholar and educator, serving as an Assistant Professor in the Department of English at the University of Sargodha, Punjab, Pakistan. Her academic pursuits have centered around English language and literature, and she has made valuable contributions to the field. With a commitment to fostering learning and knowledge, she continues to play a pivotal role in higher education.

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